REMARKS

In the Office Action mailed August 4, 2009 the Office noted that claims 1-15 were pending and rejected claims 1-15. Claims 1 and 9 have been amended, no claims have been canceled, and, thus, in view of the foregoing claims 1-15 remain pending for reconsideration which is requested. No new matter has been added. The Office's rejections and objections are traversed below.

ALLOWABLE SUBJECT MATTER

The Office has indicated that claims 4 and 13 would be in a condition for allowance if re-written in independent form. The Applicant thanks the Office for the consideration given the claims and submits that the claims are allowable for the reasons discussed below.

REJECTIONS under 35 U.S.C. § 103

Claims 1-15 stand rejected under 35 U.S.C. § 103(a) as being obvious over Madan ("How DSL Works") in view of Bengtsson, ("Zipper Performance when mixing ADSL and VDSL in terms of reach and capability"). The Applicants respectfully disagree and traverse the rejection with an amendment and argument.

Madan discusses how DSL works using an example of an ADSL connection or line from home to a service provider's central office. A DSL modem at home handles the line and divides the available bandwidth of this telephone line using either FDM or

6

echo cancellation. This can also be described as one single transceiver (the DSL modem) allocating different parts of the available bandwidth of the line to different usage (voice and data), using either FDM or echo cancellation.

Bengtsson discusses how the maximum reach varies at different bit rates on a VDSL system, when different numbers of ADSL and VDSL systems share the same binder. It is further discussed how different lines (VDSL and ADSL lines) of a binder affects each other in terms of maximum reach, depending on the duplex scheme used for the different lines. Each line thus uses one duplex scheme and not a mixture of duplex schemes, although different lines of a binder may use different duplex schemes. The different duplex schemes (FDD, TDD or Zipper) are compared when it comes to what scheme that provides the best reach for different mixes of ADSL and VDSL sharing the same binder.

The Applicant has amended claim 1 to recite "the step of allocating from said single transceiver different parts of the available bandwidth *of one line* to different duplex methods simultaneously." (Emphasis added) Support for the amendment may be found, for example, on page 10, line 4-5 and line 10-11, and in figure 9 of the specification, indicating that one transceiver corresponds to one line. As claim 1 relates to a method performed in one single transceiver, this transceiver can only allocate bandwidth of one line corresponding to this transceiver.

In the present invention according to the subject

matter of the amended independent claims 1 and 9, the single transceiver allocates different parts of the available bandwidth of one line to different duplex methods simultaneously, FDD, TDD, burst mode duplex and full duplex with echo cancellation are examples of different duplex methods. The claims thus build on the novel idea that it is possible to mix different duplex methods for different part of the spectrum on one line with the same single transceiver. By doing this, it is possible to provide an optimized transceiver that utilizes the bandwidth in a very efficient fashion. The different duplex methods can be utilized simultaneously, thereby allowing for both long reach and high capacity. Both the possibility of full capacity for one user is provided by a burst mode band and at the same time a guaranteed capacity is always provided by the FDD bands if more users are transmitting at the same time.

However, such a method should not be confused with the usage of different duplex methods for different lines of a binder. Bengtsson discusses how different lines (VDSL and ADSL lines) of a binder affect each other in terms of maximum reach, depending on the duplex scheme used for the different lines, page 2 of Bengtsson, line 2-3, discloses: "in this contribution, we investigate VDSL in a network with ADSL customers, where ADSL and VDSL coexist in the same binder group." A binder group is a group of several lines. What is shown in figure 1, is thus Zipper (i.e. VDSL duplex scheme) coexisting with ADSL, in a

binder group. There is nothing in Bengtsson indicating that different duplex schemes are used simultaneously on one line.

Maddan or the combination of Madan and Bengtsson likewise fail to disclose such a feature.

For at least the reasons discussed above, Madan and Bengtsson, taken separately or in combination, fail to render obvious the features of claims 1 and 9 and the claims dependent therefrom.

Withdrawal of the rejections is respectfully requested.

SUMMARY

It is submitted that the claims satisfy the requirements of 35 U.S.C. § 103. It is also submitted that claims 1-15 continue to be allowable. It is further submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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